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| 10/787,145 | 02/27/2004 | Christophe Preguica | Q79956 | 4599 |

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SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

| EXAMINER | |
|---|---|
| ZHANG, SHIRLEY X | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/787,145 | PREGUICA ET AL. | |
| | Examiner | Art Unit | |
| | Shirley X. Zhang | 4121 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *27 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1 - 4* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *February 27, 2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

This non-final office action is responsive to the U.S. Patent Application No. 10/787,145 filed on February 27, 2004.

### *Priority Claims*

1. Acknowledgement is made of a claim for priority under 35 U.S.C. 119(a)-(d) to the foreign application No. 03 02 443 filed in France on February 28, 2003.

### *Information Disclosure Statement*

2. The information disclosure statement (IDS) submitted on February 27, 2004 with the original application file is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the information disclosure statement.

### *Abstract*

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because it contains several instances of the legal term "means". Correction is required. See MPEP § 608.01(b).

***Specification***

4. The disclosure is objected to because of the following informalities:

The disclosure on page 4, lines 10-13 recites that "*In this example, a data network is composed of two domains $N_A$ and $N_B$ separated by a cloud $N_4$, composed only of* ***IPv6*** *network elements. This example illustrates the normal case of two sites which have migrated to the* ***IPv4*** *technology*", where the highlighted term "**IPv6**" appears to be a typographical error of "IPv4", and the highlighted term "**IPv4**" appears to be an error of "IPv6".

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 1-3** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,748,434, "Adaptive Node Selection" to Kavanagh.

**Regarding claim 1**, Kavanagh teaches a domain name server (DNS) (Fig. 1 discloses a network module comprising a DNS server and an adaptive node selector; column 2, lines 1-5 further disclose that Kavanagh's invention is about an adaptive domain name server), associated with a database (database is an integral part of a DNS server implementation, as is well known in the art), having means to receive requests R containing a domain name (column 4, lines 66-67 disclose that SGSN1 sends the DNS query to the DNS server looking for the APN symbolic name to be resolved, i.e., the DNS server has means to receive the query for the symbolic name) , and the means to return to the sender of the said request, a response containing one or more addresses associated with the said domain name (column 5, lines 1-2 disclose that the DNS server returns the list of IP addresses for the APN), characterized in that the said address or addresses are sequenced within the said response by the said domain name server (Fig. 4 and column 6, lines 6-7 disclose that the records in a DNS response may further be listed in order of preference by the adaptive DNS server).

**Regarding claim 2**, Kavanagh teaches a domain name server according to claim 1, in which the sequencing is effected at least as a function of the content of the said request (column 7, lines 45-48 disclose that the APN records filter/swapping/preference-selection tool may be used to select records based on the location/origin of the source address of the DNS request, i.e., the result of the selection is effected by the source address of the request, which is in the content of the request).

**Regarding claim 3**, Kavanagh teaches a domain name server according to claim 2, in which the sequencing is in addition effected as a function of the topology of the network (column 6, lines 3-6 disclose that the DNS records are grouped based upon site

of architecture, and filtered according to location of the Site that queries were received), where the most local address, used to address both the said sender of the request and the network element corresponding to the said domain name, is inserted first (column 7, lines 45-52 disclose that the selection tool relates to the IP address of the node sending the DNS request and that of the APN requested, and then returns the nearest GGSN IP address, making the selection process location based).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not

commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kavanagh, as applied to claim 3 above, further in view of IETF Draft by Draves ("Default Address Selection for IPv6", hereinafter "**Draves**") and Keith Moore's email posted on the IETF IPv6 Operations (v6ops) Working Group's discussion board on November 18, 2002, hereinafter "**Moore**".

**Regarding claim 4**, Kavanagh teaches a domain name server according to claim 3.

Kavanagh does not teach that the sequencing is effected in such a manner that in the case of the presence of an IPv4 cloud (here $N_4$) between the said sender of the request and the network element corresponding to the said domain name, an address of the "6to4" type is inserted first (here $a_{6to4}$).

However, Draves teaches the method of having the applications/hosts choose the 6to4 address over the local IPv6 address when the 6to4 mechanism is used to enable two IPv6 sites to communicate over an IPv4 cloud.

It would have been obvious to combine Draves and Kavanagh so that the 6to4 address is inserted first by the DNS server into the address sequence of a DNS response in the presence of an IPv4 cloud between the said sender of the request and the network element corresponding to the domain name.

One would have been motivated to combine Draves and Kavanagh by Moore's email posting, where Moore suggested that to solve the problem of address selection in a

IPv6 transition network, one should stop relying so much on applications/hosts choosing destination addresses and instead have the network make a best effort choice of the addresses.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent Application Publication No. 2004/0221061, "Dynamic Load Balancing For Enterprise IP Traffic";

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shirley X. Zhang whose telephone number is (571) 270-5012. The examiner can normally be reached on Monday through Friday 7:30am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Taghi Arani can be reached on (571) 272-3787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TAGHI ARANI
SUPERVISORY PATENT EXAMINER

11/07/07